

FIELD DATA REPORT

**November 2006 Limited C-Sand Groundwater Sampling Program
Former C-6 Facility
Torrance, California**

Prepared By:

**Tait Environmental Management, Inc.
701 N. Parkcenter Dr.
Santa Ana, California 92705**

December 22, 2006



Tait Environmental Management, Inc.
Engineering • Environmental • Compliance

December 22, 2006

Mr. Joseph Weidman
Haley & Aldrich, Inc.
3 West Carrillo St.
Suite 201
Santa Barbara, CA 93101

Subject: Field Data Report for the November 2006 Limited C-Sand Groundwater Sampling Program, Former C-6 Facility, Torrance, California.

Dear Mr. Weidman:

This letter summarizes and presents the field data collected during November 2006 Groundwater Sampling event at the Former C-6 Facility in Torrance California. The groundwater sampling activities were performed in accordance with the following:

- *Groundwater Monitoring Work Plan 2006 by CDM for Boeing Realty Corporation (BRC), Date January 31, 2006*
- *Table 1: November 2006 Limited C-Sand Groundwater Sampling Program, Former C-6 Facility Site, Los Angeles, California, from CDM, Dated November 16, 2006.*
- *Figure 2: Proposed C-Sand Extraction and Injection Wells, Former C-6 Facility Site, Los Angeles, California, from CDM, Dated November 16, 2006.*

The following is a brief summary of our field activities:

- A total of 6 C-Sand monitoring wells were gauged for depth to water and total depth, purged and sampled between November 20th and 22nd, 2006 using a Grundfos pump, Horiba water tester with flow through cell and Solinst water level meter. Ferrous iron and hydrogen sulfide testing were performed in all wells using Hach DR/890 field instrument.
- The samples were submitted to TestAmerica, a Boeing approved Laboratory for volatile organic compound (VOC) analysis using EPA Method 8260B. A rush turn around time (TAT) of 48 hours was requested for all samples under this program.
- Purge water from all wells was transported to a storage tank in the treatment compound.



December 22, 2006
Limited C-Sand Groundwater Sampling Program – November 2006
Boeing Realty Corporation, Former C-6 Facility, Torrance California

Please contact the undersigned at (714) 560-8200, if you have any questions or comments.
TEM is pleased to be of continued service to Boeing Realty Corporation.

Sincerely,

Tait Environmental Management, Inc.

A handwritten signature in black ink, appearing to read "Carmen Lo".

Carmen Lo
Environmental Analyst

A handwritten signature in black ink, appearing to read "Mehmet Pehlivan".

Mehmet Pehlivan, PG, CHG
Senior Hydrogeologist

Cc:

Robert P. Scott, Boeing Realty Corporation
Ravi Subramanian, CDM
Beth Breitenbach, Haley & Aldrich

Attachments:

- A: December 2006 Quarterly WDR Abbreviated Sampling Plan
- B: Daily Field Reports and Daily Health & Safety Sign Off Sheets
- C: Chain of Custody Records, Groundwater Sampling Data Sheets

Table 1
Limited C-Sand Groundwater Sampling Program - November 2006
Former C-6 Facility
Los Angeles, California

Well ID	Water Bearing Unit	C-Sand Groundwater Analytical Program November 2006		
		VOCs	Field Parameters ¹	Dissolved Gases and Minerals ²
MWC015	C-Sand	x	x	x
MWC016	C-Sand	x	x	
Wells installed in October/November 2006				
IWC001	C-Sand	x	x	x
IWC002	C-Sand	x	x	
EWC002	C-Sand	x	x	
MWC024	C-Sand	x	x	x

Notes:

VOCs = Volatile organic compounds by EPA Method 8260B

¹ Field Parameters = pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), electrical conductivity (EC), temperature, ferrous iron, and hydrogen sulfide

² Dissolved gases and minerals analysis will consist of:

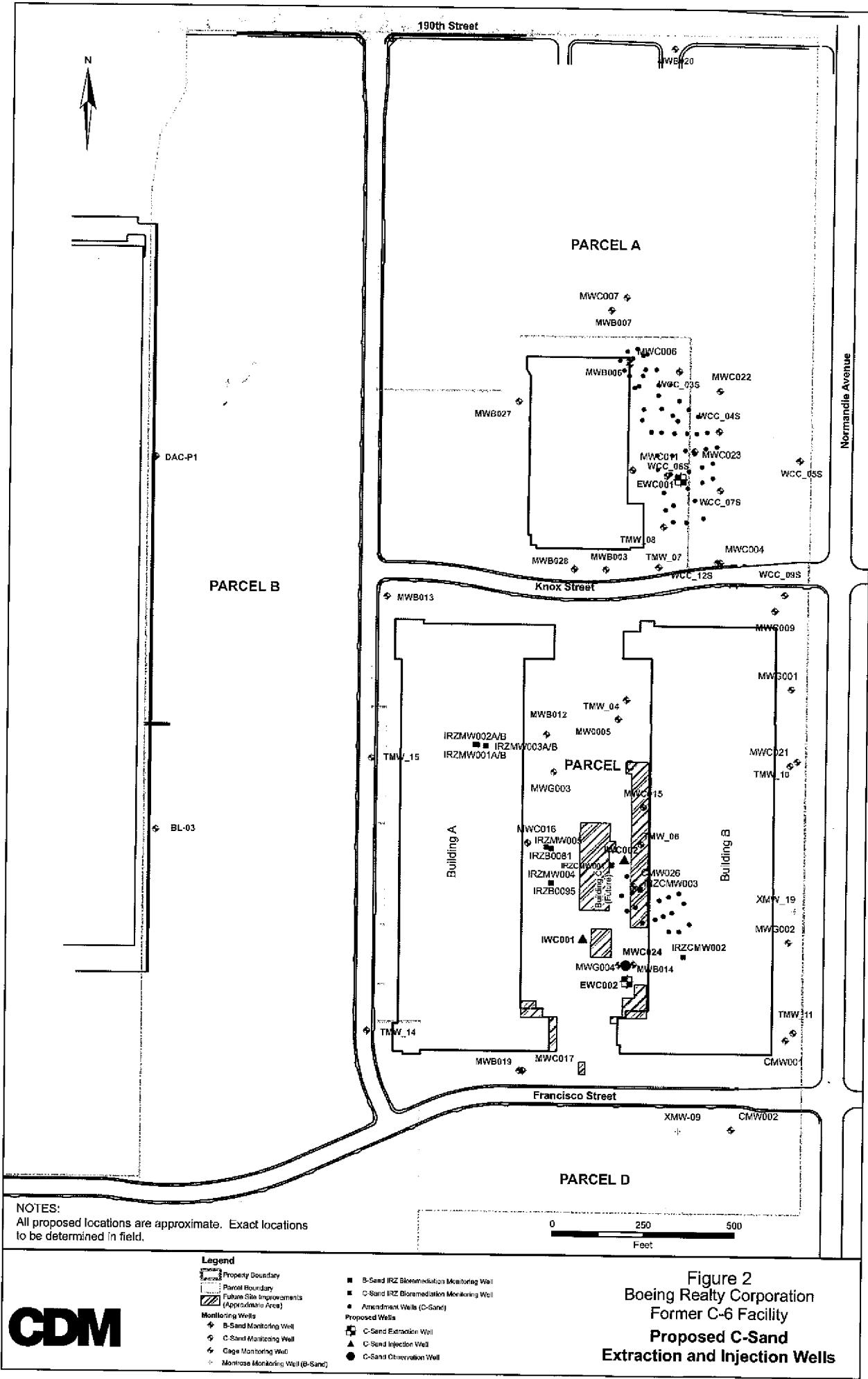
carbon dioxide, nitrogen, ethane, ethane and methane by RSK-175 and SM 4500-C (carbon dioxide) or equal;

Total organic carbon (TOC) by EPA Method 415.1 or equal;

Sulfate, nitrite, nitrate, ammonia nitrogen, orthophosphate, and chloride by EPA Method 300 Series or equal;

Manganese II (Mn II) by SM 3500-MND or equal or using a field test kit;

Total alkalinity by EPA Method 310 or equivalent or using a field test kit



CDM

BOE-C6-0052418



11/22/2006

DAILY SAFETY MEETING

11/21/2006

Project Name: EM2727 Torrance Sampling Date: 11/20/2006
 Project Number: EM2727 Event (6 wells) Presented by: KL, CL, LW

Check the Topics/Information Reviewed:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Safety is everyone's responsibility | <input checked="" type="checkbox"/> Heat and cold stress | <input type="checkbox"/> Dust and vapor control |
| <input checked="" type="checkbox"/> Accidents can be costly | <input type="checkbox"/> Equipment and machinery familiarization | <input type="checkbox"/> Excavation/trenching inspections/documentation |
| <input checked="" type="checkbox"/> No horseplay | <input type="checkbox"/> Excavator swing and loading | <input type="checkbox"/> Confined space entry |
| <input checked="" type="checkbox"/> Site health and safety plan reviewed | <input type="checkbox"/> Decontamination steps | <input type="checkbox"/> Refueling procedures |
| <input type="checkbox"/> Review emergency protocol | <input type="checkbox"/> Portable tool safety and awareness | <input type="checkbox"/> Full face respirators with proper cartridges |
| <input checked="" type="checkbox"/> Directions to hospital | <input checked="" type="checkbox"/> Orderly site and housekeeping | <input type="checkbox"/> Hot work permits |
| <input checked="" type="checkbox"/> Employee Right-To-Know/MSDS location | <input type="checkbox"/> Smoking in designated areas | <input type="checkbox"/> Flying debris hazards |
| <input checked="" type="checkbox"/> First aid, safety, and PPE location | <input type="checkbox"/> Parking and lay down area | <input type="checkbox"/> Overhead utility locations cleared |
| <input checked="" type="checkbox"/> Safety glasses, hard hat, safety boots | <input type="checkbox"/> Leather gloves for protection | <input type="checkbox"/> Polson ivy / oak / sumac |
| <input checked="" type="checkbox"/> Fire extinguisher locations | <input type="checkbox"/> Vehicle backing up hazards | <input type="checkbox"/> Upgrade to Level C at: PID (<u> </u> eV)
> <u> </u> ppmv |
| <input checked="" type="checkbox"/> Daily work scope reviewed | <input type="checkbox"/> Sharp object, rebar, and scrap metal hazards | <input type="checkbox"/> Work stoppage at: PID (<u> </u> eV)
> <u> </u> ppmv, % LEL > 10% |
| <input type="checkbox"/> Strains and sprains | <input type="checkbox"/> Effects of the night before? | <input type="checkbox"/> All underground utilities cleared? |
| <input checked="" type="checkbox"/> Slips, trips, and falls | <input type="checkbox"/> Weather conditions (rain/snow) | <input type="checkbox"/> Flex-N-Stretch performed |
| <input type="checkbox"/> Eye wash station locations | <input checked="" type="checkbox"/> Latex gloves inner/nitrile gloves outer | <input type="checkbox"/> Anticipated visitors |
| <input type="checkbox"/> Electrical ground fault | <input type="checkbox"/> Vibration related injuries | |
| <input type="checkbox"/> Vehicle safety and driving/road conditions | <input type="checkbox"/> Open pits, excavations, and trenching hazards | |
| <input type="checkbox"/> Public safety and fences | <input type="checkbox"/> Noise hazards | |

Other Discussion Items/Comments/Follow-up Actions:

I have reviewed the plan, understand it, and agree to comply with all of the health and safety requirements. I understand that I may be prohibited from working on the project for violating any of the requirements. Visitors will be required to be escorted in the restricted access zone. Visitors must comply with Tait Environmental Management, Inc. escort directions while on site at all times. Non-compliance with escort directions will not be tolerated, and violators will be requested to leave the site immediately.

A physician based on medical examination has approved me to wear a respirator. I have been trained in the appropriate use, care, and storage of respiratory equipment. I have been respirator fit tested; and I have my respirator available for use in the field. I understand that I am to use the equipment supplied to me by my employer. I further understand that this equipment is provided solely for my benefit with the intent to minimize my exposure to potentially hazardous conditions. In the event of such usage, I agree to indemnify and hold harmless Tait Environmental Management, Inc. and all of its employees from and against any and all losses, demands, claims, liabilities, lawsuits, damages, costs, and expenses arising, in any way, from the use of the equipment.

NAME

SIGNATURE

COMPANY

(11/21/06)
Carmen Co
Kevin Lambert
Linda Wigner
Kevin Lambert
Carmen Co
Kevin Lambert
Carmen Co

Carmen Co
Kevin Lambert
Linda Wigner
Kevin Lambert
Carmen Co
Kevin Lambert
Carmen Co

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Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities
- Complete form, obtain signatures, and file with the Daily Summary



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DAILY FIELD REPORT

Project Name:	C-6 Torrance GW Sampling Event	Project #:	EMR727	Date:	11/12/06
Personnel:	CL	Sub Contractors:	-		

Task: Continued Conducting Groundwater Sampling for MWCo15

Time Arrived at Site:	8:00	Time Left Site:		Total Hours at Site:	
Odometer (Start):		Odometer (End):		Total Miles:	

Equipment List:

- Solinst Water Level Meter Serial #: _____
- Solinst Water/Product Level Interface Meter Serial #: _____
- Horiba U-22 Water Quality Meter Serial #: _____
- PID/FID Type: _____ Serial #: _____
- Submersible Pump Type: _____ Serial #: _____
- Generator Type: _____ Serial #: _____
- Company Truck License #: _____
- Other(s): Computer

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

At 8:00 Stopped by wal-mart get ice

8:15. Preparing Bottles & Labels
(CO₂ Analysis) for MWCo15 (Because of using the
preserved bottle for analysis on 11/12/06)

Client Signature (if applicable): _____

Date: _____



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DAILY FIELD REPORT

Project Name:	Torrance C-6 Sampling Event	Project #:	EM 2727	Date:	11/20/06.
Personnel:	CL.	Sub Contractors: _____			

Task: Conduct GWS Event.

Time Arrived at Site:	7:30	Time Left Site:	4:30	Total Hours at Site:	9-
Odometer (Start):		Odometer (End):		Total Miles:	

Equipment List:

- Solinst Water Level Meter Serial #: _____
- Solinst Water/Product Level Interface Meter Serial #: _____
- Horiba U-22 Water Quality Meter Serial #: _____
- PID/FID Type: _____ Serial #: _____
- Submersible Pump Type: _____ Serial #: _____
- Generator Type: _____ Serial #: _____
- Company Truck License #: _____

Other(s): Computer, printer & Hach/DR 890.

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

- 7:30 Arrived Site . got ice & water.
- 8:00 Signed H & S Sheet.
- 8:15 Set up Computer & Printer.
- 8:20 Prepared Samples Bottles & Labels.

Client Signature (if applicable): _____ Date: _____



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Project Name: Torrance C-6 Facility GW S Event | **Project #:** EM-227 | **Date:** 11/20/06

- 9:00 Started entering Data for Ecoc.
- 9:45 tried to ~~enter~~ Scan Document for Lester W. to Clara, but Scanner breaks down.
- 10:00 Delivered Bottles to MWC015
- 10:30. Preparing Samples Bottles for the rest of wells.
- 13:00 Started doing Ferrous iron & Hydrogen Sulfide Test on site
- 15:45 organized Ecoc. & getting the Samples ready.
- 14:15 Lab picked up samples.



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DAILY FIELD REPORT

Project Name: FORMER C-6	Project #: EM-2727	Date: 11/20/06
Personnel: L.W., K.L., Coran	Sub Contractors:	No one

Task: GUL PURGING OF SAMPLING

Time Arrived at Site: 8:00	Time Left Site: 16:00	Total Hours at Site: 9:0
Odometer (Start):	Odometer (End):	Total Miles:

Equipment List:

- Solinst Water Level Meter Serial #: 29848
- Solinst Water/Product Level Interface Meter Serial #: _____
- Horiba U-22 Water Quality Meter Serial #: 1092
- PID/FID Type: _____ Serial #: _____
- Submersible Pump Type: GRUNDFOS Serial #: GPC-04
- Generator Type: _____ Serial #: _____
- Company Truck License #: 6P4 P75
- Other(s): _____

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

ARRIVED AT 8:00. MORNING. TAIL GATE MEETING.

CALIBRATION & DECON EQUIPMENT.

WATERS PASS DATA ON WOES. ALSO TALKING
FOR NEW WOES

Client Signature (if applicable): _____ **Date:** _____



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Project Name: FORMER C-6	Project #: EM.2727	Date: 1/29/06
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- 945 SET-UP UP TO PURGED MWC-016. PUMP WOULDNT
KEVIN & I TROUBLESHOOT PUMP. KEVIN TALKED
TO MAIKE AT BISCO. HE SAID WE ~~WILL~~ NEED
A SCALE FOR PUMP. COURIER WILL TAKE 2 HOURS
TO DELIVER. I'M DRIVING MYSELF. (BET AT
11:00. Went to office. Talked to Tom about situation)
- 13:15 ARRIVED BACK TO SITE. GAVE KEVIN HIS ~~ALL~~
EQUIPMENT. INSTALLED PUMP INTO MWC016.
- 13:46 STARTED PURGING
- 14:00 TOOK FIELD BLANKS.
- 15:00 - FINISHED PURGING
- 15:05 TOOK SAMPLE. GAVE CARMEN PAPERWORK
CLEANED UP LABEL WORK WITH BLACK PAINT.
- 15:30 BACK TO COMPOUND
- 16:00 DECON EQUIPMENT. TRANSFER WATER INTO STORAGE TANK



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DAILY FIELD REPORT

Project Name:	C-6 Tormine GWS Sampling	Project #:	EM2727	Date:	11/21/06
Personnel:	CL	Sub Contractors:	-		

Task: Conducting groundwater sampling event

Time Arrived at Site:	7:30	Time Left Site:	16:00	Total Hours at Site:	8.5
Odometer (Start):		Odometer (End):		Total Miles:	

Equipment List:

- Solinst Water Level Meter Serial #: _____
- Solinst Water/Product Level Interface Meter Serial #: _____
- Horiba U-22 Water Quality Meter Serial #: _____
- PID/FID Type: _____ Serial #: _____
- Submersible Pump Type: _____ Serial #: _____
- Generator Type: _____ Serial #: _____
- Company Truck License #: _____
- Other(s): Computer & Hach DR/1890.

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

7:30 Got ice & water.
8:00 Started preparing labels &
sample bottles for today's
event.

Client Signature (if applicable): _____ **Date:** _____



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Project Name:	C-6 Torrance GW Sampling	Project #: TME27	Date: 11/21/06
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At 9:00 doing QA/QC Sample Identification form.

At 9:30 Started preparing ECOC.

At 10:00 Talked to Michelle Chamber from TA about the LTO for C-1 LB. 11/27/06 Event.

At 9:40 Ferrous Iron & Hydrogen Sulfide Test for well IWCO2.

At 11:50 Ferrous Iron & Hydrogen Sulfide Test for IWCO1.

At 12:30 Continued inputting Data to tables in ECOC.

At 13:55 Ferrous Iron & Hydrogen Sulfide Test for ZWCO2.

At 14:30 Continued inputting Data to table in ECOC.

At 15:40 Ferrous Iron & Hydrogen Sulfide for MWCO4

At 16:00 Cleaned up & left the site & delivered the samples to the Lab.



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DAILY FIELD REPORT

Project Name:	C-6	Project #:	EM2727	Date:	11/22/06
Personnel:	KL, CL	Sub Contractors:			

Task: Resample MWL 015 for CO₂.

Time Arrived at Site:	0800	Time Left Site:		Total Hours at Site:	
Odometer (Start):		Odometer (End):		Total Miles:	

Equipment List:

- Solinst Water Level Meter Serial #: TAIT 01
- Solinst Water/Product Level Interface Meter Serial #: _____
- Horiba U-22 Water Quality Meter Serial #: 5025011 Bisco
- PID/FID Type: _____ Serial #: _____
- Submersible Pump Type: Grundfos Serial #: GP02
- Generator Type: _____ Serial #: _____
- Company Truck License #: F 150
- Other(s): _____

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

0800 Arrive @ site. Calibrate equip. Prepare equip / bottles for resampling MWL 015.
0900 U-22 Horiba (Serial # 5025011) would not calibrate for DO. When calibrated on

Client Signature (if applicable): _____ Date: _____



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Project Name: EN C-6

Project #: EN2727

Date: 11/22/06

11/21/06, DO took a long time to zero.

Additionally, DO readings appeared unusually high during yesterday's purging. Contacted Bisco to discuss issue. Mike (Bisco) will not charge TAiT for U-22. Calibrated another U-22 (Lester's) & will use today. All remaining Sampling equipment property of TAiT - not Bisco's.

Carmen Lo on site to drop off bottles & additional paperwork.

0930 Set up on MWC 015.

1145 · Finish Sampling MWC 015. Return to compound

1230 · Clean up & leave site. Head to C-1 to drop off equip for Sampling event on 11/27/06.

1430 · Drop off sample (CO_2) from well MWC 015@ Test America.



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Project Name:	C-4	Project #:	EM2727	Date:	11/21/06
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1010 Added back to WCC-095.

1030 Added back to TMW-15.

1035 Set up on well IWC001.

1200 Finish sampling IWC001. Return to compound.

1230 Set up on HWC024, EWC002

1400 Finish sampling EWC002. Return to compound to pump out purge water.

1430 Set up on HWC024

1400 Set up on HWC024. Return to compound

Clean up & leave site.



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DAILY FIELD REPORT

Project Name:	C-6 Sampling	Project #:	EM2727	Date:	11/21/06
Personnel:	Sub Contractors:				

Task: Sample four remaining wells

Time Arrived at Site:	0730	Time Left Site:		Total Hours at Site:	
Odometer (Start):		Odometer (End):		Total Miles:	

Equipment List:

- Solinst Water Level Meter Serial #: TAIT 01
- Solinst Water/Product Level Interface Meter Serial #: Bisco 5025011
- Horiba U-22 Water Quality Meter Serial #: _____
- PID/FID Type: _____ Serial #: _____
- Submersible Pump Type: Grundfos Serial #: 6P02
- Generator Type: _____ Serial #: _____
- Company Truck License #: F150
- Other(s): _____

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

0730 Arrive @ site. Prep for day's sampling.
Decon equip / calibrate equip. Sign H&S.
Set up on 1st well.

1000 Finish sampling IWC001. Obtained FB @ 1000. Return to compound.

Client Signature (if applicable): _____ Date: _____



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DAILY FIELD REPORT

C-6

Project Name: <u>WDR Sampling</u>	Project #: EM2727	Date: 4/20/06
Personnel: KL, LW, CL	Sub Contractors: ~	

Task: WDR Sampling Event

Time Arrived at Site: 0730	Time Left Site:	Total Hours at Site:
Odometer (Start):	Odometer (End):	Total Miles:

Equipment List:

- Solinst Water Level Meter Serial #: TAIT 1
- Solinst Water/Product Level Interface Meter Serial #: _____
- Horiba U-22 Water Quality Meter Serial #: TAIT S/N - 01
- PID/FID Type: _____ Serial #: _____
- Submersible Pump Type: Grundfos Serial #: TAIT GP02
- Generator Type: _____ Serial #: _____
- Company Truck License #: F 150
- Other(s): _____

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

0730 Arrive @ site. Sign H&S. Prep. for day's sampling. Calibrate equip.
0830 Collect Decon / Equip Blank.
0900 Contact Bisco to order tubing for new wells

Client Signature (if applicable): _____

Date: _____



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Project Name:	C-6	Project #:	EM 2727	Date:	11/20/06
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0930 Set up on well MWCO15

1000 Lester W. pump not working. Contact Bisco. Mike of Bisco said that a "shroud" for a 4" diameter well is needed or else pump will burn up. Lester is heading to Bisco to pick up pump & 2 4" shrouds.

1045 Currently on stand-by. Contact Mehmet P. to apprise of situation.

1330 Lester on site w/ shroud. Resumed purging / Sampling MWCO15

1345 Dennis Carlson (being) on site.

1500 Finish Sampling MWCO15. Move to MWCO16 to assist Lester w/ well / Sampling

1530 Return to compound to pump out purge water.

1600 Move to C-1 to pick up extra VOA's for tomorrow's BLANKS.

Date 11/20/2006

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION:

Project Manager: Mehmet Pehlivan
 Company Name: Tait Environmental Management, Inc.
 E-mail: mpehlivan@tait.com
 Phone Number: (714)560-8200
 Fax Number: (714)560-8235
 Mailing Address: 701 North Parkcenter Drive
 Santa Ana, CA, 92705

COO Number: TEM11202006KL

LABORATORY INFORMATION:

Project Name: Torrance GW Sampling Event 11/20/2006
 Project Number: EM227
 Collection Area: Former C-6 Facility Torrance
 Purchase Order:
 Billing Address: 701 North Parkcenter Drive
 Santa Ana, CA, 92705
 LabEDD CC: Mehmet Pehlivan

Sample Identification	Date	Time	Matrix	Turn Around Time			FID Reading	Remarks					
				HCL	2	X							
Total Alkalinity													
Total Organic Carbon													
EB_TAIT112006_0001	11/20/2006	9:00	Aqueous	HCL	3	X		Norm					
DB_TAIT112006_0001	11/20/2006	9:30	Aqueous	HCL	3	X		Norm					
FB_TAIT112006_0001	11/20/2006	14:00	Aqueous	HCL	3	X		Norm					
MWC015_WG12006_0001	11/20/2006	14:35	Aqueous	various	210	X	X	Norm					
MWC016_WG12006_0001	11/20/2006	15:05	Aqueous	HCL	3	X	X	Norm					
							85005T						
							85022						
							85009						
							85008						
							85023						
							85024						
# of Containers													
Container Preservative													
TB_TAIT112006_0001	11/20/2006		Aqueous	HCL	2	X							
EB_TAIT112006_0001	11/20/2006		Aqueous	HCL	3	X							
DB_TAIT112006_0001	11/20/2006		Aqueous	HCL	3	X							
FB_TAIT112006_0001	11/20/2006		Aqueous	HCL	3	X							
MWC015_WG12006_0001	11/20/2006		Aqueous	various	210	X	X						
MWC016_WG12006_0001	11/20/2006		Aqueous	HCL	3	X	X						
							85010						
Client Log Record													
Collected By:	K. L. W. CL	Print Name:	Kevin Lombert	Signature:	J. Lombert	Date:	TAI	11/20/06					
Relinquished By:			Kevin Lombert										
Received By:			Chandler Co.										
Relinquished By:			Carmen Co.										
Received By:			Jon Duerk										
Relinquished By:			Jefferson										
Received By:			John G.										
Relinquished By:			John G.										
Received By:			John G.										

Groundwater Sampling Data Sheet

Page 1 of 1

TAIT Environmental Management, Inc.

Project Name:	C-1 (MWC01S Resample for O ₂)		Date:	11/22/06
Project No.:	EM 2727		Prepared By:	KC
Well Identification:	MWC01S		Weather:	Partly Cloudy
Measurement Point Description:	Toe, North		Pump Intake:	100 - 125
Depth to LNAPL (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft) ($A - B = C$)	LNAPL Thickness (ft-bmp)	One (1) Casing Volume (gallons) ($C \times D = E$)
... 0.25	120.38	60.17	... 1.6	... 1.6
<i>(0.25)</i>				
D Gallons/Foot	0.75	2	4	6
E Well Diameter (in)	0.02	0.16	0.65	1.47
F Field Equipment:	Grundfos Pump Solinst, Horiba			
G Purge Method:	Good			
H Well Condition:	Good			
I Gallons per foot of casing	0.02	0.16	0.65	1.47
J Well Diameter (in)	0.75	2	4	6
K Casing/Screen	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	Ph
1051	26.0	1.6	60.71	7.67
1050	0.5	31.15	1.6	60.73
1101	1.0	42.30	1.6	60.73
1100	1.5	50.45	1.6	60.73
1111	2.0	58.60	1.6	60.73
1116	2.5	66.75	1.6	60.73
1121	3.0	74.90	1.6	60.73
Purge Start Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth $B - (C \times .80)$
1035	1121	1.6	76	126.26
				Sample ID: MWC-015_W6_112206_0001
Notes:				

ft-bmp = feet below measuring point

Pump/Purge water to compound tank.
Drum No.: _____

September 2006 Quarterly and WDR Monitoring Program
 Former C-6 Facility
 Los Angeles, California

Well ID	Date	Time	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)	Recorded By	Equipment Type	Comments
MWC015	1/1/2006	14:45	0.00 mg/L	0. 0318 mg/L	CJ	Hach DR/890	
MWC016	1/5/06	15:10	0. 00 mg/L	0. 00 mg/L		Hach DR/890	
IWS001						Hach DR/890	
IWS002						Hach DR/890	
EWS002						Hach DR/890	
EWS004						Hach DR/890	
						Hach DR/890	
						Hach DR/890	
						Hach DR/890	
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						Hach DR/890	

Groundwater Sampling Data Sheet

Project Name: Boeing Finance C-6	Date: 11/20/06	Prepared By: LN									
Project No.: EM 2727											
Well Identification: MWC-C-014	Weather: Sunny ~ 80° F										
Measurement Point Description: TGC Blackwall											
Pump Intake: ~1/S											
Screen: 102.5 - 127.5											
Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft) (A-B-C)	Casing Thickness (ft-bmp)	One (1) Casing Volume (gallons) (C X D-E)	Three (3) Casing Volumes (E x 3)	1/2 Casing Volume (E/2)	Above Screen Volume (Top screen - DTW) x 17 (40.99)	Screen Volume (Screen length x 17) (16.25)	1/2 screen Volume	
61.51	61.51	128.00	66.49	---	N/A	N/A	N/A	26.64	16.25	8.21	
Gallons/Foot			Field Equipment: Solinst, Horiba								
Well Diameter (in)	0.75	2	4	6	Purge Method: Ground FOS						
D Gallons per foot of casing	0.02	0.16	0.65	1.47	Well Condition: (Good)						
Time	Casing/ Screen Height (ft)	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	Ph	Temperature (°C)	Turbidity (NTU)	Conductivity (S/m)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
14:13	0	27.0	1.0	61.95	6.67	22.9	0	0.23	2.37	64	close/little odor
14:21	0.5	35.2	0.98	61.90	6.71	22.8	0	0.23	2.43	68	close/little odor
14:28	1.0	43.4	0.98	61.90	6.71	22.9	0	0.23	2.41	71	close/little odor
14:36	1.5	51.6	0.98	61.90	6.71	22.9	0	0.23	2.36	74	close/little odor
14:44	2.0	59.8	0.98	61.90	6.71	22.9	0	0.23	2.36	75	close/little odor
14:52	2.5	68.0	0.98	61.90	6.74	22.9	0	0.23	2.36	74	close/little odor
15:00	3.0	76.2	0.98	61.90	6.74	22.9	0	0.23	2.36	74	close/little odor
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth B - (C x .80)	Water Level at Sampling Time (ft-bmp)	Sample Collection Time	Sample Identification			
13:46	15:00	0.98	78 hours	1 above 3 screen	74.80	61.90	15:05	FIELD - Butane FB-trif-WG12006-0001			
Notes: Purged at total of 78 gpm After Sampling			Ferrous Iron: 0.00 mg/L Hydrogen Sulfide: 0.00 mg/L			Dup. Drum No.: 14:00 ft-wc					



TAIT Environmental Management, Inc.

Groundwater Sampling Data Sheet

Page 1 of 1

Project Name:	C-6 Sampling			Date:	11/20/06		
Project No.:	EM 2727			Prepared By:	KL		
Well Identification:	NWCD15			Weather:	Sunny		
Measurement Point Description:	TOX,			Pump Intake:	~ 110		
A Depth to LNAPL (ft-bmp)	B Well Total Depth (ft-bmp)	C Water Column Height (ft) (A - B = C)	D LNAPL Thickness (ft-bmp)	E One (1) Casing Volume (gallons) (CxD=E)	F Three (3) Casing Volumes (gallons) (E x 3)	G Above Screen Volume (Top screen - DFW)xD (E/2)	H Screen Volume (Screen length x D) 1/2 screen Volume
60.12 60.12	120.42	60.30	--	--	--	39.88	39.88
Gallons/Foot				Field Equipment:	Solinst, Horiba		
Well Diameter (in)	0.75	2	4	6	Purge Method:	Ground fos Method	
Gallons per foot of casing	0.02	0.16	0.65	1.47	Well Condition:	Good / Added loc 1c	
Time	Casing/ Screen	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	pH	Temperature (°C)	Turbidity (NTU)
1352	Above	26	1.4	60.57	6.86	23.3	3.3
14:00	0.5	34.2	1.2	60.57	6.95	23.3	3.5
14:06	1.0	42.4	1.4	60.57	6.98	23.3	3.5
14:12	1.5	50.4	1.4	60.57	7.01	23.3	3.7
14:18	2.0	58.8	1.4	60.57	7.04	23.3	3.9
14:24	2.5	67.0	1.4	60.57	7.04	23.3	4.2
14:30	3.0	75.2	1.4	60.57	7.07	23.3	4.0
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth B - (C x .80)	Water Level at Sampling Time (ft-bmp)	Sample Collection Time
1333	1430	1.4	76	Above 26 ft Screen: 3	72.18	60.57	1435
Notes:	Ferric iron: 0.00 mg/L Iron sulfide: 0.0318 mg/L			Mw 015 Well 2006-0001 Dummett Pump transfer to compound tank.			
							Dup.

ft-bmp = feet below measuring point

BOE-C6-0052439

September 2006 Quarterly and WDR Monitoring Program
 Former C-6 Facility
 Los Angeles, California

Well ID	Date	Time	Ferrous Iron (mg/L) (Field Measurement)	Hydrogen Sulfide (mg/L) (Field Measurement)	Recorded By	Equipment Type	Comments
TJLCo02	11/21/06	9:40	0.15 mg/L	0.00 mg/L	CJ	Hach DR/890	
TJLCo01	11/25/06	0:00	0.00 mg/L	0.00 mg/L		Hach DR/890	
EWCo02	(3:25)	0:06	0.06 mg/L	0.0166 mg/L		Hach DR/890	
MULCo04	(5:40)	0.04 mg/L	0.00 mg/L			Hach DR/890	
						Hach DR/890	
						Hach DR/890	
						Hach DR/890	
						Hach DR/890	
						Hach DR/890	
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						Hach DR/890	

Groundwater Sampling Data Sheet

Page 1 of 1

Project Name:	C-4	Date:	11/21/06								
Project No.:	EM 2727	Prepared By:	KL								
Well Identification:	EWC002	Weather:	Partly Cloudy								
Measurement Point Description:	TOC, North	Pump Intake:	100 -								
Depth to LNAPL (ft-bmp)	A Well Total Depth (ft-bmp)	B Water Column Height (ft) (A - B = C)	C LNAPL Thickness (ft-bmp)								
---	10.32	120.24	59.42								
Gallons/Foot	0.75	2	0.65								
Well Diameter (in)	4	6	1.47								
Gallons per foot of casing	0.02	0.16	0.65								
Well Equipment:	Solinst, Horiba										
Purge Method:	Ground Gas Pump / Added Acid / Soft Baffles										
Time	Casing/Screen	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	pH	Temperature (°C)	Turbidity (NTU)	Conductivity (μmho)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
1309	Above	23.00	1.4	61.52	7.05	22.7	6.7	0.169	8.78	67	clear/water
1315	0.5	31.15	1.4	61.52	7.05	22.7	5.5	0.169	8.78	67	
1321	1.0	39.30	1.4	61.52	7.04	22.7	4.1	0.170	8.80	68	
1327	1.5	47.45	1.4	61.52	7.05	22.7	4.0	0.171	8.80	70	
1333	2.0	55.60	1.4	61.52	7.05	22.6	4.1	0.171	8.80	71	
1339	7.5	63.75	1.4	61.52	7.05	22.7	4.5	0.169	8.77	71	
1345	7.0	71.10	1.4	61.52	7.05	22.7	4.6	0.171	8.79	72	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth B - (C x .80)	Water Level at Sampling Time (ft-bmp)	Sample Collection Time	Sample Identification			
1252	1345	72.0	72.0	72.70	66.52	1350					

Notes: CDM's table indicates that EWC002, TD is 111'. Gauged EWC002 @ 121' Review of well development log confirmed that TD is 121'. Ferrous iron: 0.0 mg/L Hydrogen Sulfide: 0.01 mg/L

ft-bmp = feet below measuring point

tot of New 100 foot Tail of Pumped purge water to Drum No.: Compound tank.

Groundwater Sampling Data Sheet

Page _____ of _____

Project Name:	C-6	Date:	11/21/00								
Project No.:	EM 2727	Prepared By:	V.L.								
Well Identification:	TWC-001	Weather:	Sunny (Partly cloudy)								
Measurement Point Description:	TDC, North	Pump Intake:	~100 screen: 95-115								
Depth to LNAPL (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft) (A - B = C)	LNAPL Thickness (ft-bmp)								
---	114.40	114.42	51.96								
Gallons/Foot	0.75	2	4								
Well Diameter (in)	0.02	0.16	0.65								
D Gallons per foot of casing	0.02	0.16	0.65								
Time	Casing/Screen	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	pH	Temperature (°C)	Turbidity (NTU)	Conductivity (µm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
1116	Above	21.0	1.5	64.14	6.99	22.7	5.0	0.144	7.98	21	Clear / No odor
1120	0.5	27.5	1.6	64.14	6.94	22.8	7.9	0.151	8.02	26	
1124	1.0	34.0	1.6	64.14	6.94	22.8	8.9	0.151	8.10	25	
1128	1.5	40.5	1.6	64.15	6.97	22.7	11.4	0.151	8.18	31	
1132	2.0	47.0	1.6	64.15	6.97	22.7	13.2	0.151	8.17	35	
1134	2.5	53.5	1.6	64.15	6.97	22.7	16.4	0.152	8.19	36	
1140	3.0	60.0	1.6	64.15	6.98	22.7	16.7	0.152	8.18	36	
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth B - (C x .80)	Water Level at Sampling Time (ft-bmp)	Sample Collection Time	Sample Identification			
1102	1140	1.6	661.0	1102.0	73.05	104.15	1145	1145	New 100 foot tubing		
Notes:		Ferrous iron: 0.00 mg/L Hydrogen sulfide: 0.00 mg/L To converge tank									

ft-bmp = feet below measuring point



TAIT Environmental Management, Inc

Groundwater Sampling Data Sheet

Page 1 of 1

Project Name:	C-6 Sample			Date:	11/21/06						
Project No.:	EM 2727			Prepared By:	KL						
Well Identification:	IW002			Weather:	Cloudy						
Measurement Point Description:	TOC, North			Pump Intake:	~ 100' screen: 96- 14 -6						
Depth to LNAPL (ft-bmp)	Depth to Static Water Level (ft-bmp)	Well Total Depth (ft-bmp)	Water Column Height (ft) (A - B = C)	LNAPL Thickness (ft-bmp)	One (1) Casing Volume (gallons) (CxD=E)						
10.40	10.40	115.77	105.37	—	—						
—	—	—	—	—	—						
Gallons/Foot	Field Equipment: Solinst, Horiba										
Well Diameter (in)	0.75	2	4	6	Purge Method: Grundfos Pump / Add-a-lock	Very Soft Bottom					
D Gallons per foot of casing	0.02	0.16	0.65	1.47	Well Condition: Good / Added lock						
Time	Casing/ Screen	Volume Purged (gallons)	Flow Rate (gpm)	Water Level (ft-bmp)	pH	Temperature (°C)	Turbidity (NTU)	Conductivity (µm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
0911	Above	24.0	1.5	61.80	7.16	22.6	4.7	0.116	7.39	11	Clear / No odor
0915	30.5	1.6	61.81	7.15	22.6	4.9	0.114	7.40	7		
0919	31.0	1.6	61.85	7.14	22.6	5.3	0.116	7.45	6		
0923	43.5	1.6	61.84	7.13	22.6	5.7	0.115	7.53	7		
0927	50.0	1.6	61.86	7.13	22.6	6.1	0.115	7.63	8		
0931	56.5	1.6	61.86	7.12	22.6	7.3	0.115	7.64	8		
0935	63.0	1.6	61.86	7.12	22.7	7.6	0.115	7.67	7		
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery Water Level Depth B - (C x .80)	Water Level at Sampling Time (ft-bmp)	Sample Collection Time	Sample Identification			
0855	0935	1.6	64.0	Above 24.0 Screen: v3	71.47	16.86	0936	TWC 002-W6112106-002 Dup.	① 0936 Pump purge water to		
Notes:	06/11/06 field blank 0 1000 (PP-TAIT)(2106-0001).	Ferrous iron: 0.15 mg/L	H2S Hydrogen Sulfide: 0.00 mg/L	New 100 foot Tubing					Drum No.: compound tank.		

ft-bmp = feet below measuring point

Groundwater Sampling Data Sheet

Page 1 of 1

TAIT Environmental Management, Inc.

Project Name:	C-4	Date:	4/21/00
Project No.:	EM 2727	Prepared By:	KC
Well Identification:	W/C024	Weather:	Partly Cloudy
Measurement Point Description:	Tec-North	Pump Intake:	~100-
Depth to Static Water Level (ft-bmp)	100.06	Well Total Depth (ft-bmp)	123.11
LNAPL (ft-bmp)	100.94	Water Column Height (ft) (A - B = C)	13.05
LNAPL Thickness (ft-bmp)	0.04	One (1) Casing Volume (gallons) (C x D = E)	—
LNAPL (ft-bmp)	100.94	Three (3) Casing Volumes (gallons) (E x 3)	—
LNAPL Thickness (ft-bmp)	0.04	½ Casing Volume (E/2)	—
LNAPL (ft-bmp)	100.94	Above Screen Volume (Top screen - DTW x 1/2)	35.34'
LNAPL Thickness (ft-bmp)	0.04	Screen Volume (Screen length x 1/2)	35.34'
LNAPL (ft-bmp)	100.94	Screen Length (ft)	81.5
Gallons/Foot		Field Equipment:	Solinst, Horiba
Well Diameter (in)	0.75	2	4
Gallons per foot of casing	0.02	0.16	0.65
Well Condition:	Good	Purge Method:	Ground for Pump
Time	Casing/Screen	Volume Purged (gallons)	Flow Rate (gpm)
1457	Above	23.00	1.6
1502	0.5	31.15	1.6
1508	1.0	39.30	1.6
1514	1.5	47.46	1.6
1520	2.0	55.60	1.6
1526	2.5	63.75	1.6
1532	3.0	71.90	1.6
Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged
1442	1532	1.6	72.0
Total Casing Volumes Purged	80% Recovery Water Level Depth E - (C x .80)	Water Level at Sampling Time (ft-bmp)	Sample Collection Time
About 73.8	73.27	61.04	1535
Screen Y3			Sample Identification
Notes:	Ferric Iron: 0.04 mg/L Hydrogen sulfide: 0.00 mg/L Used new 100' tubing Hypochlorite side: 0.00 mg/L	Drum no.: 15024 W/C024 106-0001	Pump purge water + compound tank

ft-bmp = feet below measuring point

QA/QC Sample Identification Form

Project Name: Torrance C-6 Sampling Event.

Project #: En 2727.

Date	Time	QA/QC Sample Type (Duplicate, Field Blank, Equipment Blank, Split)	Sample ID	Sample Location	Primary Sample Reference	Analytical Method(s)	Organic-Free Water Source and Reference	Name	Comments
11/20/06	-	TB-TAIT1206-0001 Trip Blank.		-	-	8260B	T.A	T.A	
11/20/06	9:00	EB-TAIT1206-0001 Equipment Blank. Compound		-	-			KL	
11/20/06	9:30	DB-TAIT1206-0001 Dacor Blank. Compound		-	-			KL	
11/20/06	14:00	Field Blank. TB-TAIT1206-0001		-	-			LW	
11/22/06	-	Duplicate							
11/22/06	-	Trip	TB-TAIT1216-0001	-	-	8260B	T.A	T.A	
	8:00	Equipment	EB-TAIT1216-0001 Compound	-	-			KL	
	8:30	Dacor	DB-TAIT1216-0001 Compound	-	-			KL	
	10:00	Field	TB-TAIT1216-0001 Compound	-	-			KL	
	9:36	Duplicate	TACO2-WG1216-0002 In/Coo 2 In/Coo 1-WG1216-0001	-	-			KL	
11/22/06	-	Trip	TB-TAIT1226-0001	-	-	8260B	T.A	-	



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Instrument Calibration Sheet

G-6

Project Name:			Project #:				
Date	Time	Instrument Type	Instrument Serial No.	Calibration Method	Calibration Reading	Calibrated By	Remarks
11/20/06	0730	Solisht	TAIT 01	Steel tape	50'/50.06	KL/LW	
11/20/06	0800	Horiba	TAIT 511/01	cal Sol	0.00	KL	
11/21/06	0800	Horiba	Z5025011	cal Sol	0.00	KL	
11/22/06	0830	Horiba	5025011	cal Sol	6.000	KL	Do w/rd not zero
11/22/06	0930	Horiba	9012025	calSol	0.00	KL	